



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,553	11/28/2003	Hajime Nakagawa	FS-F03214-01	8306

37398 7590 02/28/2005

TAIYO CORPORATION
2111 JEFFERSON DAVIS HIGHWAY
#412, NORTH
ARLINGTON, VA 22202

EXAMINER

CHEA, THORL

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,553

Applicant(s)

NAKAGAWA ET AL.

Examiner

Thorl Chea

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11282003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fukui et al (Pub.No.: US 2002/0102502) and Tsuji (US Patent No. 5,286,619).

Fukui et al disclose a photothermographic material substantially as claimed. See the SBR latex on page 33, [0360], [0362] wherein the -Bu- in the polymer chain is 26.5; on page 16, [0144], [0145], page 17, [0147] to [0175]; the average particle diameter of the latex is from 1 nm to 50,000 nm, preferably 5 nm to 1,000 nm in column 16, [0143]; the silver behenate as silver salt of an organic acid on page 35, [0393], [0396] and on page 12, [0086]; the Tg of binder is from 20 °C to 70 °C on page 19, [0132]; the reducing agent and development accelerator in the abstract and page 2, formula (II) and formula (I).

Fukui discloses a photothermographic having polymer latex having butadiene monomer with percentage and glass temperature same to that claimed, but fails to disclose that the butadiene unit wherein R01 and R02 are never both hydrogen such as presented in the claimed invention. However, it has been known in Tsuji to associate the chain of polymer latex with a group other than hydrogen atom to improve development uniformity and rapid image forming. See the polymer in columns 9-10 such as polymer II-1 to II-9 wherein a methyl group associated therewith. Accordingly, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the polymer latex containing the butadiene group taught

Art Unit: 1752

in Fukui et al including the use of the substituents known in the formation of latex taught in Tsuji with a reasonable expectation of achieving a binder with good quality such as providing the material development uniformity and rapid image form, and thereby provide an invention as claimed. The size of the particle size of 30 to nm is within the scope of particle taught in Fukui et al. The halogen ions in claim 15 is related to the impurity associated with the latex formation and would be considered as inherent to the process for forming the latex taught in Fukui et al.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fukui et al (Pub.No.: US 2002/0102502) and Tsuji (US Patent No. 5,286,619) as applied to claims 1, 3-15 above, and further in view of either Ezoe et al (US Patent No. 6,331,386) or Goto (US Patent No. 6,156,491). The hydrazine compound of formula in claim 2 has been known as contrast enhancing agent and taught in Goto in column 37, formula (H), and Ezoe et al in column 37, formula (H). It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the hydrazine compound in the material obtained by the combination of Fukui et al (Pub.No.: US 2002/0102502) and Tsuji (US Patent No. 5,286,619) to improve its image contrast, and thereby provide a material as claimed.

4. Claims 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fukui et al (Pub.No.: US 2002/0102502) and Tsuji (US Patent No. 5,286,619), and Encyclopedia of Chemical Technology, Fourth Edition, Volume 15, John Willey & Sons, pp. 34-52 (John Willey & Sons).

Fukui et al disclose a photothermographic material substantially as claimed. See the SBR latex on page 33, [0360], [0362] wherein the -Bu- in the polymer chain is 26.5; on page 16, [0144], [0145], page 17, [0147] to [0175]; the average particle diameter of the latex is from 1 nm to

Art Unit: 1752

50,000 nm, preferably 5 nm to 1,000 nm in column 16, [0143]; the silver behenate as silver salt of an organic acid on page 35, [0393], [0396] and on page 12, [0086]; the Tg of binder is from 20 °C to 70 °C on page 19, [0132]; the reducing agent and development accelerator in the abstract and page 2, formula (II) and formula (I). Tsuji discloses a polymer latex with a chain of polymer latex contains a group other than hydrogen atom to improve development uniformity and rapid image forming. See the polymer in columns 9-10 such as polymer II-1 to II-9 wherein a methyl group associated therewith. John Willey & Sons on page 41, fifth paragraph discloses the water-soluble initiator including hydrogen peroxide in the process for forming polymer latex. Fukui discloses a polymer latex having butadiene monomer with percentage and glass temperature same to that claimed in the present claimed invention, but fails to disclose that the butadiene unit wherein R01 and R02 are never both hydrogen such as presented in the claimed invention. However, it has been known in Tsuji to associate the chain of polymer latex with a group other than hydrogen atom to improve development uniformity and rapid image forming. See the polymer in columns 9-10 such as polymer II-1 to II-9 wherein a methyl group associated therewith. Accordingly, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the polymer latex containing the butadiene group taught in Fukui et al including the use of the substituents known in the formation of latex taught in Tsuji with a reasonable expectation of achieving a binder with good quality such as providing the material development uniformity and rapid image form, and thereby provide an invention as claimed. The use of the peroxide as polymerization initiator is taught in John Willey & Sons. The halogen ions in claim 17, 21 is related to the impurity associated with the latex formation and would be considered as inherent to the process for forming the latex taught in Fukui et al.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 3-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/724,706 (Pub. US 2004/0121273) in view of Fukui et al (US 2001/010250). The development accelerator has been known in Fukui et al and it would have been obvious to accelerate the development of the material claimed in the copending application with the development accelerator taught in Fukui et al to provide the invention claimed the copending application. Claims

This is a provisional obviousness-type double patenting rejection.

7. Claims 13-21 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/724,706. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention as claimed fully encompasses the invention claimed in the copending application.

Art Unit: 1752

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references provided with the information disclose polymer latex containing butadiene monomer similar to that taught in the prior art provided in the rejections above.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/722,553

Page 7

Art Unit: 1752

Tchea *tlm*
February 14, 2005

Thori Chea
Thori Chea
Primary Examiner
Art Unit 1752